KEO Monthly Newsletter

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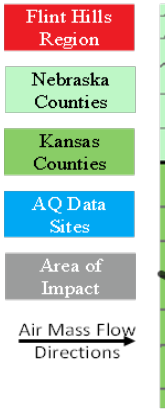

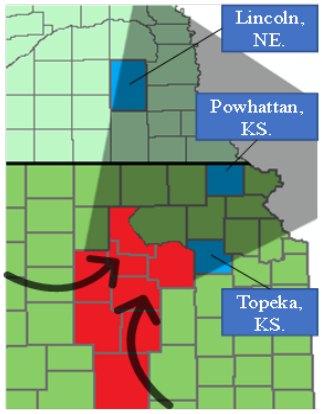

Director's Message

Kickapoo Environmental Office (KEO) Mission is to promote the safety, health, and welfare of the Kickapoo Tribe in Kansas and improve the quality of life on the Kickapoo Nation by safeguarding the environment and natural resources. The overall program goal is to develop a comprehensive environmental protection program for the Kickapoo Tribe in Kansas that will protect the natural, cultural, and human resources. he Kickapoo Environmental Office is responsible for managing programs associated with solid waste/recycling, water resources, air quality, watershed management, brown field, wastewater, and environmental education. The Office is primarily funded by grants through the U.S. Environmental Protection Agency and U.S. Bureau of Indian Affairs, but the office works very closely with the U.S. Army Corps of Engineers, Federal Emergency Management Agency, Kansas Department of Health and Management, Kansas Forest Service, Tribal and local agencies.

In carrying out our mission to protect environmental and public health, we will be respectful professional, flexible, honest and helpful in all dealings with our community that we are serving. We will listen actively to our residents so we can better understand and identify their needs so that we will be able fully responsive and better provide valuable Environmental services and information.
Our Department looks forward to the opportunities in our changing environment to meet and exceed the needs and expectations our residents to ensure a healthy and safer environment to live.

BE SAFE AND HEALTHY EVERYONE!

Nestoria Wright

Maintaining A Clean, Safe and Healthy Environment: Preventing Infection

Maintaining a Clean, Safe and Healthy Environment discusses what infection control is and why it is important. Healthy people with healthy immune systems can fight off germs. However, people that are old or unwell may be more likely to develop infections and diseases. Older adults have a three-fold increased risk for pneumonia and a 20-fold higher risk for urinary tract infection than younger people do.

What is infection control and why is it important?

Germs such as bacteria, viruses and fungi are everywhere! Some are actually helpful, like the ones living in our own bodies. There are many that are harmful and can cause serious disease or death. Infections can be transmitted in three main ways :

1. Directly from person-to-person;
2. Indirectly through equipment and supplies, and

Through the air.

The goal of infection prevention and control is to prevent the transmission of infection, and to keep both the older adult and their care-givers safe

Standard Precautions Maintain a Healthy Environment

Infectious diseases spread through blood or other bodily fluids.

Standard precautions are a set of rules designed to prevent the transmission of disease through blood and body fluid when providing care. These precautions are meant to protect you as the caregiver. They are based on the principle that all blood, body fluids, secretions, broken skin and mucus may contain infectious germs.

Infectious diseases can spread through blood or other bodily fluids. Common blood-borne diseases include Hepatitis B, Hepatitis C and HIV.

Older people cared for at home are often colonized or infected with multi-drug resistant organisms, or MDROs. MDROs are bacteria and other germs that have developed resistance to antimicrobial drugs. One example of an MDRO is a type of Staph infection which is resistant to many antibiotics, called Methicillin-Resistant Staphylococcus Aureus (MRSA). Your hands and clothing can become contaminated by having contact with the older adult and their immediate environment.

Unless the older adult has been diagnosed with an MDRO or bloodborne infection, they and you as the caregiver will not know. That is why it is important to use Standard Precautions to prevent the transmission of these infectious diseases.

Importance of Handwashing in a Healthy Environment

The good news is that getting these diseases is preventable. The most important way to prevent the transfer of germs is hand hygiene. Every person should be treated as though they have an infectious disease. An eldercare giver looking to maintain a clean and healthy environment will use:

1. Hand hygiene - demonstrating proper hand washing techniques
2. Protective barriers - including gloves, gown, mask, eye protection, or face shield.
3. Dispose of laundry and hazardous waste properly - use towels only once after contact, and wash linens routinely and when soiled.

Proper handling of contaminated areas and devices - clean the client's environment routinely and when soiled with body fluids.

Tips to Prevent Infectious Diseases Spread Through the Air

Infectious diseases can also be spread through the air, such as a cough or sneeze. These diseases include influenza and the common cold.
When caring for an older adult with signs and symptoms of a respiratory infection (such as fever, cough and/or sneezing) and whose health care provider has allowed them to remain at home, you should remember the following tips:

1. If possible, encourage the older adult to cover the mouth/nose with the elbow rather than the hand.
2. Place surgical masks on the coughing person when tolerated and appropriate.
3. Maintain hand hygiene after contact with respiratory secretions.

If at all possible, avoid close contact (anything less than 3 feet) . This is probably not easy to do while working. So, if the older adult cannot wear a mask for some reason, you should.

Flu Vaccines Keep Adults Healthier

It is very important that both the older adult and you, the caregiver, receive your annual influenza vaccine, or "flu shot." Influenza is a serious disease that can lead to hospitalization and sometimes even death. Every flu season is different, and influenza infection can affect people differently. Even healthy people can get very sick from the flu and spread it to others. Older adults and people with medical illness are at particularly high risk for developing flu-related complications. *During recent flu seasons, between 80% and 90% of flu related deaths have occurred in people 65 years and older.*

References:

Academycare.com

Where can I get more information?

CDC has compiled a list of selected publications related to vaccine effectiveness.

Edward A. Belongia, Danuta M. Skowronski, Huong Q. McLean et al. Repeated annual influenza vaccination and vaccine effectiveness: review of evidence. *Expert Review of Vaccines*. 2017 Jun; 16 (7): 723-36. doi: 10.1080/14760584.2017.1334554.external icon

2020-2021 Flu Season FAQ

Burn Assessment Impact on Monitored Air for the Kickapoo Reservation

By: Chance Bentley

Livestock waste and fertilized soils account for approximately 80% of ammonia (NH_3) emissions in the United States. However, automobiles and wildfires/burnings are also essential sources of NH_3 and are likely underestimated in current inventories. In the atmosphere, NH_3 reacts with acidic pollutants [i.e., sulfate (SO_4^{2-}) and nitrate (NO_3^-)] to form particulates (e.g., ammonium sulfate, ammonium bisulfate, ammonium nitrate), contributing to atmospheric particulate matter (PM) (Puchalski et al., 2019). **These particulates in the air lead to a decrease in air quality in the area and can be dangerous to children and elderly individuals, especially those with asthma, lung conditions, and smokers.** According to the EPA's National Emissions Inventory, over 3.2 million Kansas acres were burned in 2017, resulting in ~112 tons of $PM_{2.5}$ emissions (NEI). During burning seasons in the past years, Kansas Ambient Air Monitoring Network monitors have recorded elevated PM concentrations, ozone, and other pollutants downwind of the Flint Hills region (KDHE). Burning across the Flint Hills region generally occurs from mid-March throughout the spring and into early-May. With most prescribed burning activities happening during this period, large amounts of PM and ozone precursors are released into the atmosphere during a relatively short timeframe.

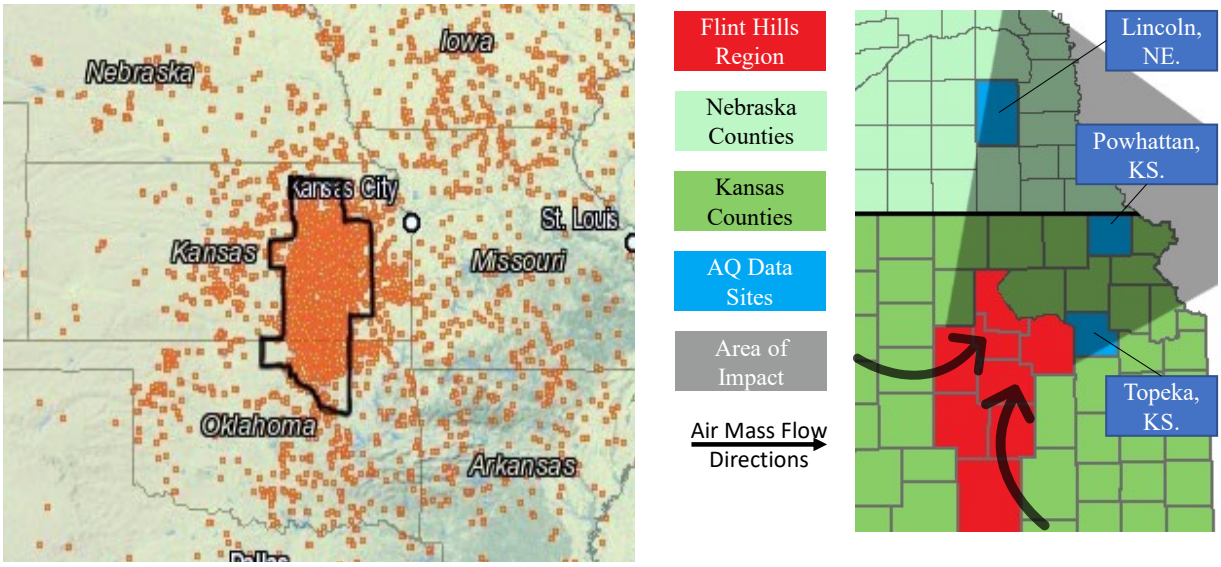

Figure 1a (left) Map showing satellite image of the Flint Hills fire activities in April, 2016 (Adapted from the NASA Fire Information for Resource Management System; the perimeter of the Flint Hills region is indicated in bold lines) Source - Zifei Liu, 2017. **Figure 1b** (right) - Depiction of air movement pattern across the flint hills that tends to push air NE across Kansas and Nebraska (Figure from the Burn Assessment conducted by the KEO).

The smoke from these fires is then carried large distances away from their source. The tribal air monitoring station in Powhattan uses filter packs to detect selected particulates in the air. Data from the CASTnet (Clean Air Status and Trends Network) station in Powhattan was compared with air quality data from Topeka, KS, and Lincoln, NE. To determine how well CASTnet concentrations correlated with know degradations in air quality. The assessment conducted found that there was a strong positive correlation between the particulates measured in the CASTnet (sulfate, nitrate, and ammonium), showing that the monitoring station 1-) was able to detect the degradations in air quality seen in both the Topeka and Lincoln monitoring and 2) the elements the contribute to the degradation of air quality in the region are capable of being carried hundreds of miles away from their source.

In light of these findings, the importance of intermittent burnings (especially in a prairie setting) is something that cannot be ignored. However, the application and management of burnings can go a long way in mitigating the adverse impacts of burnings. Currently, two main strategies should be followed when determining when and how to burn. These strategies are to 1) reduce smoke production and 2) reduce the potential impacts to the smoke produced.

Reduce Smoke Production

- Frequency of burns (More less intense burnings could decrease smoke amounts)
- Ignition and burn technique
- Managing fuel load and fuel moistures
- Reduce smoldering

Reduce Impact of Smoke

- Timing of burns
- Allow for adequate smoke dispersion
- Minimize exposure of sensitive populations
- Avoid high O3 day

If you are concerned with air quality conditions, present the KEO urges you to check out https://www.airnow.gov/ and type in your address to get real-time updates and recommendations regarding air quality issues.

Manure compost contains nitrogen, potassium, and phosphorus, with the levels varying by animal species.

"Composting with Chickens Poop is Really a Form on Recycling By Sonny Fee

Chickens are a very real way to nourish your homestead and make your compost really healthy for your vegetables. Chickens are an integral part of a healthy compost. If you don't mind the extra work and care for a few egg layers, they will make your compost extra healthy and your vegetables extra nourished. It is vital to the land and reduces your carbon footprint. It will take time and be an extra chore. However, the rewards will warm your heart.

Why Is It Good For Your Plants?

Chickens can and will decimate your gardens if they get a chance. They will wreak havoc on your garden. I recommend you have your chickens separate from your garden. The worst thing they can do is scratch and eat your vegetable seeds. I know how much work goes into hoeing and organizing your garden beds.

Not everyone can identify their plants when they emerge. It is best to keep the chickens separate from your garden beds. They do, however, make excellent fertilizer. Chicken manure really is good for your vegetables.

However, know that root vegetables can be tainted by bird poop. That's why we always recommend you fertilize your vegetables with a process that makes sure the pathogens that chickens can release in their poop is virtually neutralized before you use it.

EXO2 Stream Gauge Put Back into the Delaware River

By: David Hebert

We are pleased to announce that we have replaced the EXO2 stream gauge into the Delaware River. David, the tribes' water quality coordinator says, "At this point, I am able to leave the sonde in the water and manually pull data from it every week or two. This is a temporary setup, as the final product will be able to communicate the water quality data to the satellite. I will send out another email when that whole side of the project is working again. We are making substantial progress towards reactivating another key element of the tribe's harmful algal bloom program - continuous monitoring. I want to take a moment to show appreciation for the hard work that has been done so far on this project. We very happy to have such a tremendous coordination effort from our friend, Kenny Wade (USACE) who is helping to coordinate this project. The USGS has also been invaluable during this time. Special thanks to Chantelle, Zack and others. We appreciate their patience and hard work. Later in 2021, the KEO hopes to start testing the actual **toxins** from the harmful algal blooms including microcystin toxin. Feel free to forward this email to anyone who requires documentation of progress being made at the stream gauge site. Thank you!"

Please feel free to reach out to David. As the water quality coordinator he is more than happy to help answer any questio*ns*.

Winter Survival Kits For Everyone

By Craig Wahwasuck

In an emergency, it could save our life and the lives of our passengers. Here is what you need:

- Shovel
- windshield scraper and small broom
- flashlight with extra batteries
- battery powered radio
- water
- snack food including energy bars
- raisins and mini candy bars
- matches and small candles
- extra hats, socks and mittens
- First aid kit with pocket knife
- Necessary medications
- blankets or sleeping bag
- tow chain or rope
- road salt, sand, or cat litter for traction
- booster cables
- emergency flares and reflectors
- fluorescent distress flag and whistle to attract attention

Cell phone adapter to plug into lighter

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